SysNav

CAD Navigation for Advanced Package Devices

Overview

SysNav™ is a layout visualizing and signal tracing CAD navigation software solution for printed circuit board (PCB), multi-chip module and stacked die applications. It extends Synopsys Avalon™ die-level failure analysis capabilities to the packaging industry. SysNav is the only commercially available tool able to integrate multiple, interactive IC and PCB designs with seamless CAD navigation capabilities. SysNav allows rapid signal traces on dies, stacked dies, multi-chip module and PCBs. Both Fab and Fabless teams can now trace a signal from chip to board, back to chip and then quickly navigate failure analysis tools to X, Y locations to determine the root cause of the failure.

Benefits

- SysNav displays board-level layout data while Avalon's MaskView™ displays chip- or die-level layout data

- SysNav and MaskView allow interactive tracing or highlighting of the electrical connectivity

- SysNav and MaskView have similar GUIs for easy adoption

- SysNav provides many of Avalon's board-level failure analysis capabilities, including 2D cross section and 3D view of selected small area

- Bookmark locations on package using KEdit and locate die information on board using DataLocator

- Perform Image overlay with automatic alignment capabilities

- Import net name info from Pin list file (ASCII File) and IPC 356D file

- Convert package data using GUI based application, KDBBuilder

- Interface with ThermoFisher ELITE System , FEI-V-Ion Plasma FIB and more

- Supports industry standard formats: Gerber RS 274X , ODB++, GDS and more
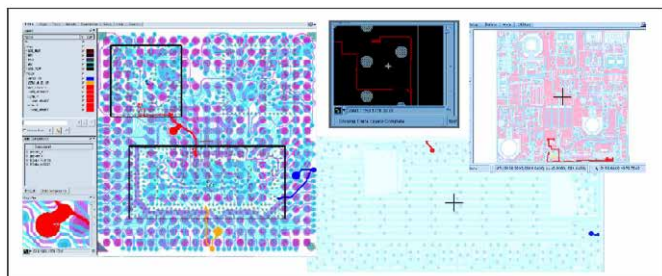

Figure 1: Multi-chip module with two ICs electrically connected to each other
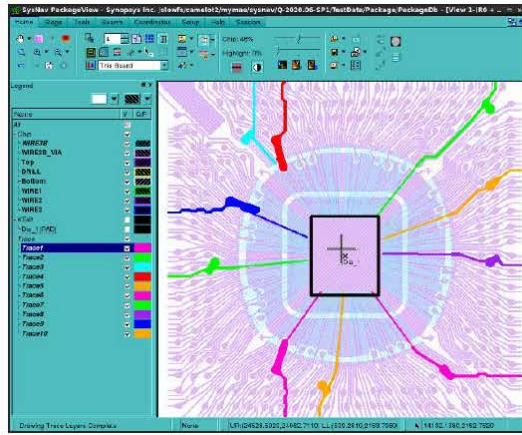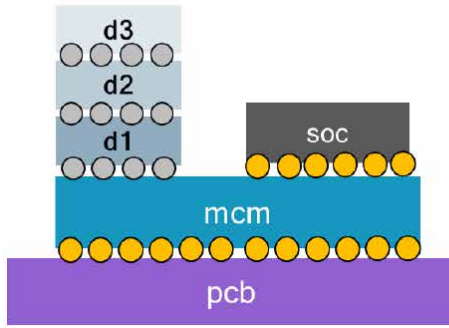
Figure 2: SysNav supports various configurations including TSV stacked-die and Wirebond

How It's Used

- Launch SysNav using the board-level layout data
- Align the die on the board. The GUI will guide the placement
- To cross-map, select the board-level signal from SysNav or die-level signal from MaskView
- Use same method to navigate equipment drivers as with MaskView